

References for Course on QM : Oxford 1980

Background reading in QM.

Either S. Gasiorowicz: Quantum Physics (1974), chs. 6,10, 14.
or P. Matthews: Introduction to Quantum Mechanics, 3rd ed. (1974), chs. 6,8, 12.

Background reading in Mathematics.

G. C. Shepherd: Vector Spaces of Finite Dimension (1966)
G. F. Simmons: Introduction to Topology and Modern Analysis, (1963), esp. pp. 290 - 297, ch. 11.

Textbooks on Philosophy of QM

M. Jammer: The Philosophy of Quantum Mechanics (1974)
B. d'Espagnat: The Conceptual Foundations of Quantum Mechanics, 2nd ed. (1976).

The Bell Inequality and Nonlocality

J. F. Clauser and A. Shimony: 'Bell's Theorem: Experimental Tests and Implications.' Rep. Prog. Phys. 41 (1978), 1881 - 1927 - general survey of the field with good bibliography.

P. Eberhard: Nuovo Cimento 38 B (1977), 75.
A. Peres: Am. Journal. Phys. 46 (1978), 745.
H. Stapp: Phys. Rev. D3 (1971), 1303.

The Kochen-Specker Paradox

F. J. Belinfante: A Survey of Hidden Variable Theories (1973) ch. 3.
Jammer (above) ch. 7 (esp. p. 325).
J. Bub: The Interpretation of Quantum Mechanics (1974) ch. 5.

Complementarity

E. Scheibe: The Logical Analysis of Quantum Mechanics (1973), ch. 1.

Quantum Logic

N. Rescher: Many-valued Logic (1969), ch. 3.
M. Dummett: 'Is Logic Empirical' in Contemporary British Philosophy (1976),

Quantum Logic (cont'd)

H. Putnam: 'How to think Quantum- logically' in P. Suppes (ed.) Logic and Probability in Quantum Mechanics (1976).

Jammer, (above) ch. 8

The Einstein - Podolsky - Rosen Paradox

A. Einstein et al Phys. Rev. 47 (1935), 777

N. Bohr Phys. Rev. 48 (1935), 696

Jammer, (above) ch. 6

D'Espagnat (above) ch. 8

Deochhamized QM.

B. C. Van Fraassen: 'Semantic Analysis of Quantum Logic' in C. Hooker (ed.) Contemporary Research in the Foundation and Philosophy of Quantum Theory (1973).

R. Healey 'Quantum Realism: naïveté is no excuse', Synthese, 42, 1979, 121-144.

Forthcoming publications:

H. Brown and M. Redhead: A Critique of the Disturbance Theory of Indeterminacy in Quantum Mechanics; Foundations of Physics, 11 (1981), 1.

M. Redhead: 'Experimental Tests of the Sum Rule' Philosophy of Science, 48 (1981), 50.

M. Redhead: 'Causality, Relativity and the EPR Paradox'. Proc. of the 1981 Keele Conference.